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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,737	09/30/2004	Lee George LABORCZFALVI	2006579-0141	5736

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CHOATE, HALL & STEWART / CITRIX SYSTEMS, INC.
TWO INTERNATIONAL PLACE
BOSTON, MA 02110

EXAMINER	
MORRISON, JAY A	

ART UNIT	PAPER NUMBER
2168	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/711,737	LABORCZFALVI ET AL.	
	Examiner	Art Unit	
	JAY A. MORRISON	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 September 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. Claims 1-32 are pending.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-32 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

4. As per claims 1-22, these claims are drawn to methods which are not statutory processes because they lack physical transformation or machine implementation that are required for these claims to be statutory.

5. As per claims 23-32, the claimed subject matter, “an isolation environment”, does not fit into any of the statutory categories (process, machine, manufacture, or composition of matter). In order for the claimed subject matter to fit into a statutory category under 35 USC 101, the Applicant is requested to further distinguish the claimed subject matter to adhere to one of these categories.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 23 is rejected under 35 U.S.C. 102(e) as being anticipated by Kagi et al. ('Kagi' hereinafter) (Publication Number 2006/0064697).

As per claim 23, Kagi teaches

An isolation environment for isolating access by application programs to native resources provided by an operating system, the isolation environment comprising: (see abstract and background)

a user isolation scope storing an instance of a native resource, the user isolation scope corresponding to a user; (virtual machine which performs isolation by virtualizing resources, paragraph [0019], lines 5-15)

and a redirector intercepting a request for the native resource made by a process executing on behalf of the user and redirecting the request to the user isolation scope. (virtual devices virtualize functionalities of physical devices, paragraph [0026], lines 1-3)

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1-22 and 24-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kagi et al. ('Kagi' hereinafter) (Publication Number 2006/0064697) in view of Czajkowski et al. ('Czajkowski' hereinafter) ("A Multi-User Virtual Machine", Proc. of the USENIX 2003 Annual Technical Conference, 2003, pages 85-98).

As per claim 1, Kagi teaches

A method for isolating access by application programs to native resources provided by an operating system, the method comprising the steps of: (see abstract and background)

(a) redirecting to an isolation environment comprising a user isolation scope a request for a native resource made by a process executing on behalf of a first user; (virtual machine which performs isolation by virtualizing resources, paragraph [0019], lines 5-15)

(b) locating an instance of the requested native resource in the user isolation scope on behalf of a first user; (virtual device inside of VMM, paragraph [0022], lines 18-21)

and (c) responding to the request for the native resource using the instance of the required native resource located in the user isolation scope. (virtual devices virtualize functionalities of physical devices, paragraph [0026], lines 1-3)

Kagi does not explicitly indicate "and an application isolation scope".

However, Czajkowski discloses "and an application isolation scope" (create isolate to run application, section 2.2, fifth paragraph)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kagi and Czajkowski because using the steps of "and an application isolation scope" would have given those skilled in the art the tools to improve the invention by providing multiple contexts with no modifications to the operating system itself. This gives the user the advantage of being able to host multiple users on a single machine.

As per claim 2, Kagi teaches

step (b) comprises failing to locate an instance of the requested native resource in the user isolation scope. (paragraph [0063], lines 3-5)

As per claim 3,

Kagi does not explicitly indicate "step (c) comprises redirecting the request to the application isolation scope".

However, Czajkowski discloses "step (c) comprises redirecting the request to the application isolation scope" (section 3.1, third paragraph)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kagi and Czajkowski because using the steps of "step (c) comprises redirecting the request to the application isolation scope" would have given those skilled in the art the tools to improve the invention by providing multiple contexts with no modifications to the operating system itself. This gives the user the advantage of being able to host multiple users on a single machine.

As per claim 4, Kagi teaches

(d) locating an instance of the requested native resource; (paragraph [0025], lines 4-6)

and responding to the request for the native resource using the instance of the requested native resource located. (paragraph [0025], lines 5-8)

Kagi does not explicitly indicate “in the application isolation scope”.

However, Czajkowski discloses “in the application isolation scope” (section 2.2, fifth paragraph)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kagi and Czajkowski because using the steps of “in the application isolation scope” would have given those skilled in the art the tools to improve the invention by providing multiple contexts with no modifications to the operating system itself. This gives the user the advantage of being able to host multiple users on a single machine.

As per claim 5, Kagi teaches

step (e) comprises creating an instance of the requested native resource in the user isolation scope that corresponds to the instance of the requested native resource located and responding to the request for the native resource using the instance of the requested native resource created in the user isolation scope. (paragraph [0026], lines 8-12)

Kagi does not explicitly indicate “in the application isolation scope”.

However, Czajkowski discloses “in the application isolation scope” (section 2.2, fifth paragraph)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kagi and Czajkowski because using the steps of “in the application isolation scope” would have given those skilled in the art the tools to improve the invention by providing multiple contexts with no modifications to the operating system itself. This gives the user the advantage of being able to host multiple users on a single machine.

As per claim 6, Kagi teaches

step (d) comprises failing to locate an instance of the requested native resource. (paragraph [0063], lines 3-5)

Kagi does not explicitly indicate “in the application isolation scope”.

However, Czajkowski discloses “in the application isolation scope” (section 2.2, fifth paragraph)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kagi and Czajkowski because using the steps of “in the application isolation scope” would have given those skilled in the art the tools to improve the invention by providing multiple contexts with no modifications to the operating system itself. This gives the user the advantage of being able to host multiple users on a single machine.

As per claim 7, Kagi teaches

step (e) comprises responding to the request for the native resource using the system-scoped native resource. (paragraph [0023], lines 1-4)

As per claim 8, Kagi teaches

step (e) comprises: creating an instance of the requested native resource in the user isolation scope that corresponds to the instance of the requested resource located in the system scope and responding to the request for the native resource using the instance of the resource created in the user isolation scope. (paragraph [0019], lines 6-10)

As per claim 9, Kagi teaches

the step of hooking a request for a native resource made by a process executing on behalf of a first user. (paragraph [0024], lines 2-5)

As per claim 10, Kagi teaches

the step of intercepting a request for a native resource executing on behalf of a first user. (paragraph [0025], lines 4-7)

As per claim 11, Kagi teaches

the step of intercepting by a file system filter driver a request for a file system native resource executing on behalf of a first user. (paragraph [0026], lines 10-14)

As per claim 12, Kagi teaches

step (a) comprises redirecting to an isolation environment comprising a user isolation scope a request for a file made by a process executing on behalf of a first user. (paragraph [0027], lines 3-7)

Kagi does not explicitly indicate "and an application isolation scope".

However, Czajkowski discloses "and an application isolation scope" (section 2.2, fifth paragraph)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kagi and Czajkowski because using the steps of "and an application isolation scope" would have given those skilled in the art the tools to improve the invention by providing multiple contexts with no modifications to the operating system itself. This gives the user the advantage of being able to host multiple users on a single machine.

As per claim 13, Kagi teaches

step (a) comprises redirecting to an isolation environment comprising a user isolation scope and an application isolation scope a request for a registry database entry made by a process executing on behalf of a first user. (paragraph [0026], lines 10-15)

Kagi does not explicitly indicate “and an application isolation scope”.

However, Czajkowski discloses “and an application isolation scope” (section 2.2, fifth paragraph)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kagi and Czajkowski because using the steps of “and an application isolation scope” would have given those skilled in the art the tools to improve the invention by providing multiple contexts with no modifications to the operating system itself. This gives the user the advantage of being able to host multiple users on a single machine.

As per claim 14, Kagi teaches

(d) redirecting to the isolation environment a request for the native resource made by a second process executing on behalf of a second user; (paragraph [0025], lines 8-12)

(e) locating an instance of the requested native resource in a second user isolation scope; (paragraph [0025], lines 10-14)

(f) and responding to the request for the native resource using the instance of the native resource located in the second user isolation scope. (paragraph [0025], lines 10-16)

As per claim 15, Kagi teaches

the process executes concurrently on behalf of a first user and a second user. (paragraph [0022], lines 4-10)

As per claim 16, Kagi teaches

step (e) comprises failing to locate an instance of the requested native resource in the second user isolation scope. (paragraph [0063], lines 3-5)

As per claim 17, Kagi teaches

step (f) comprises redirecting the request. (paragraph [0028], lines 2-5)

Kagi does not explicitly indicate “to the application isolation scope”.

However, Czajkowski discloses “to the application isolation scope” (section 2.2, fifth paragraph)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kagi and Czajkowski because using the steps of “to the application isolation scope” would have given those skilled in the art the tools to improve the invention by providing multiple contexts with no modifications to the operating system itself. This gives the user the advantage of being able to host multiple users on a single machine.

As per claim 18, Kagi teaches

(d) locating an instance of the requested resource; (paragraph [0025], lines 2-5)

and (e) responding to the request for the native resource using the version of the native resource located. (paragraph [0025], lines 3-6)

Kagi does not explicitly indicate "in the application isolation scope".

However, Czajkowski discloses "in the application isolation scope" (section 2.2, fifth paragraph)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kagi and Czajkowski because using the steps of "in the application isolation scope" would have given those skilled in the art the tools to improve the invention by providing multiple contexts with no modifications to the operating system itself. This gives the user the advantage of being able to host multiple users on a single machine.

As per claim 19, Kagi teaches

(d) redirecting to the isolation environment a request for a native resource made by a second process executing on behalf of a first user; (paragraph [0025], lines 8-12)

(e) locating an instance of the requested native resource in the user isolation scope; (paragraph [0025], lines 10-14)

and (f) responding to the request for the native resource using the instance of the resource located in the user isolation scope. (paragraph [0025], lines 10-16)

As per claim 20, Kagi teaches

step (e) comprises failing to locate an instance of the requested native resource in the user isolation scope. (paragraph [0063], lines 3-5)

As per claim 21, Kagi teaches

step (f) comprises redirecting the request to a second application isolation scope. (paragraph [0025], lines 8-12)

As per claim 22, Kagi teaches

(d) locating an instance of the requested resource; (paragraph [0025], lines 8-12)

and (e) responding to the request for the native resource using the instance of the native resource located. (paragraph [0025], lines 10-14)

Kagi does not explicitly indicate “in the second application isolation scope”.

However, Czajkowski discloses “in the second application isolation scope” (section 2.2, fifth paragraph)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kagi and Czajkowski because using the steps of “in the application isolation scope” would have given those skilled in the art the tools to improve the invention by providing multiple contexts with no modifications to the operating system itself. This gives the user the advantage of being able to host multiple users on a single machine.

As per claim 24,

Kagi does not explicitly indicate "the isolation environment further comprises an application isolation scope storing an instance of the native resource".

However, Czajkowski discloses "the isolation environment further comprises an application isolation scope storing an instance of the native resource" (section 2.2, fifth paragraph)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kagi and Czajkowski because using the steps of "the isolation environment further comprises an application isolation scope storing an instance of the native resource" would have given those skilled in the art the tools to improve the invention by providing multiple contexts with no modifications to the operating system itself. This gives the user the advantage of being able to host multiple users on a single machine.

As per claim 25,

Kagi does not explicitly indicate "the isolation environment further comprises a second application isolation scope storing an instance of the native resource".

However, Czajkowski discloses "the isolation environment further comprises a second application isolation scope storing an instance of the native resource" (section 2.2, fifth paragraph)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Kagi and Czajkowski because using the steps of "the isolation environment further comprises an application isolation scope storing an

instance of the native resource" would have given those skilled in the art the tools to improve the invention by providing multiple contexts with no modifications to the operating system itself. This gives the user the advantage of being able to host multiple users on a single machine.

As per claim 26, Kagi teaches

the redirector returns a handle to the requesting process that identifies the native resource. (paragraph [0028], lines 10-14)

As per claim 27, Kagi teaches

a rules engine specifying behavior for the redirector when redirecting the request. (paragraph [0032], lines 4-10)

As per claim 28, Kagi teaches

the redirector comprises a file system filter driver. (paragraph [0032], lines 2-5)

As per claim 29, Kagi teaches

the redirector comprises a function hooking mechanism. (paragraph [0038], lines 4-8)

As per claim 30, Kagi teaches

the function hooking apparatus intercepts an operation selected from the group of file system operations, registry operations, operating system services, packing and installation services, named object operations, window operations, file-type association operations and Component Object Model (COM) server operations. (paragraph [0026], lines 8-15)

As per claim 31, Kagi teaches

the application isolation environment further comprises a second user isolation scope storing a second instance of the native resource. (paragraph [0025], lines 8-12)

As per claim 32, Kagi teaches

the application isolation environment further comprises a second user isolation scope storing an instance of the native resource, the second user isolation scope corresponding to a second user. (paragraph [0025], lines 10-14)

Response to Arguments

10. Applicant's arguments filed 9/29/08 have been fully considered but they are not persuasive.

11. With respect to the 35 USC 101 rejections of claims 23-32 and non-statutory, Applicant argues that the claims are statutory because the claims are tired to a

machine. Respectfully, it is still not clear if the claims are drawn to a machine or a process, because a process is also tied to a machine. Therefore it is unclear which single statutory class these claims fall under and the 35 USC 101 rejections of claims 23-32 are maintained.

12. Applicant argues that Kagi does not disclose "redirecting to an isolation environment comprising a user isolation scope and an application isolation scope a request for a native resource provided by an operating system". Respectfully, Kagi does disclose the sharing of system resources between multiple virtual machines by virtualizing resources in the physical machine (paragraph [0019], lines 8-15) where each virtual machine is an isolation environment with user isolation scope with requests for native resources of the operating system. Respectfully, it is noted that the newly added Czajkowski reference discloses the application isolation scope limitation. Therefore, Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. The prior art made of record, listed on form PTO-892, and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay A. Morrison whose telephone number is (571) 272-7112. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on (571) 272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tim T. Vo/
Supervisory Patent Examiner, Art Unit 2168

Jay Morrison
TC2100

Tim Vo
TC2100